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INCHING CLOSER
LIFE ON THE SINKING ISLAND OF GHORAMARA

by

ANJANI KAPOOR

A master's capstone submitted to the Graduate Faculty in Liberal Studies in partial
fulfillment of the requirements for the degree of Master of Arts,
The City University of New York

2018

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This manuscript has been read and accepted for the Graduate Faculty in Liberal Studies in satisfaction of the capstone project requirement for the degree of Master of Arts.

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Capstone Project Advisor

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ABSTRACT

INCHING CLOSER LIFE ON THE SINKING ISLAND OF GHORAMARA

by

Anjani Kapoor

Advisor: Prof. Rebecca Boger

Through a short documentary film, this capstone project attempts to explore the impact of climate change on the coastal community at Ghoramara Island in the Sundarban Delta complex in Eastern India. Ghoramara has reduced to half its original size in the last 30 years, facing extensive soil erosion due to human interventions and climate-change driven sea level rise. This gradual process of habitat loss has severely affected the livelihood of the islanders whose primary occupation is rice and betel cultivation, fishing and prawn seed collection. The loss of livelihood and habitat has resulted in migration from Ghoramara to the nearby islands and urban centers. The terms 'climate refugees' or 'environmental refugees' have been used for Ghoramara islanders in academia as well as several media reports. To make matters worse, India has not signed the 1951 United Nations Refugee Convention nor its 1967 Protocol. Also, there is no policy or legal framework regarding Internally Displaced People (IDPs) in India. This documentary film has been conceptualized to highlight how the slowly transforming environment such as extensive soil erosion, dwindling livelihoods, and fading traditions affect this coastal community in India. It also attempts to look for the status of these Internally displaced people in the policy discourse of India. This documentary can be accessed using the following link: <https://archive.org/details/AnjaniKapoorCapstoneProject>.

ACKNOWLEDGMENTS

Thank you to my partner and support system Anshul Kamra.

Thanks also to the Ghoramara community members who welcomed me in their houses and endured my questions in their tough time.

Thank you to Prof Rebecca Boger for her constructive guidance and supervision.

Thank you Tanmoy Bhaduri for helping me build network in the city of joy, Kolkata.

I would also like to thank Prof. Tuhin Ghosh for allowing me to shoot the documents and graphs from his research papers on Ghoramara.

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“In our legends it is said that the goddess Ganga’s descent from the heavens would have split the earth had Lord Shiva not tamed her torrent by tying it into his ash-smearred locks. To hear this story is to see the river in a certain way: as a heavenly braid, for instance, an immense rope of water, unfurling through a wide and thirsty plain. That there is a further twist to the tale becomes apparent only in the final stages of the river’s journey – and this part of the story always comes as a surprise, because it is never told and thus never imagined. It is this: there is a point at which the braid comes undone; where Lord Shiva’s matted hair is washed apart into a vast, knotted tangle. Once past that point the river throws off its bindings and separates into hundreds, maybe thousands, of tangled strands.”

– Amitav Ghosh, *The Hungry Tide*

CONCEPTUALIZATION OF THE DOCUMENTARY

About 92 km from south Kolkata, capital city of the Indian state of West Bengal, lies a slowly vanishing island of Ghoramara. For over three decades, the raging tidal waves have been gnawing at the edges of this fragile delta island, reducing it to half its original size. According to folklore, an Englishman’s horse was killed by a tiger on an island in Sundarbans delta. Thus was named the island of ‘Ghoramara,’ literally meaning ‘killing a horse.’ This island was given by Britishers to the native population to “act as watchmen, spotting trading ships from rival nations like Portugal.”¹ But the *watchful eyes* see the land of their ancestors washing away into the depths of the river.

According to Hajra et al., the Indian Sundarban Delta had a total land loss of 162.879 km² during 1969-2001.² However, the amount of land accretion over the past 30 years is estimated to be

¹ Anuradha Sengupta, “The Slipdown,” *Roads & Kingdoms*, May 20, 2016, <http://roadsandkingdoms.com/2016/the-slipdown/>.

² Rituparna Hajra, Amit Ghosh, and Tuhin Ghosh, “Comparative Assessment of Morphological and Landuse/Landcover Change Pattern of Sagar, Ghoramara, and Mousani Island of Indian Sundarban Delta Through Remote Sensing,” in *Environmental and Earth Observation Case Studies in India*, 2017, 153–72,

82.505 km².³ The Ghoramara Island in the Sundarban Delta Complex of the Bay of Bengal has significantly reduced in size due to embankment failure. The geomorphological changes observed in Ghoramara are “largely as a result of the changes in the estuarine hydrodynamics influenced both by natural processes and anthropogenic activities.”⁴ Ghoramara is located on the Hooghly estuary, where saltwater from the Bay of Bengal mixes with freshwater from three major rivers—the Ganges, the Brahmaputra and the Meghna. Recently three islands within the Hooghly estuary—Lohachahara, Suparibhanga and Bedford have disappeared and Ghoramara has significantly eroded.⁵

A time series analysis done by the School of Oceanographic Study at Jadavpur University, Kolkata shows that total area of Ghoramara was 8.51 sq. km in 1975 and it has decreased substantially to 4.43 sq. km in 2012.⁶ (Figure 1) During the period of 1997-1990, Ghoramara lost the villages of Khasimara, Khasimara Char, Lakshmi Narayanpur, Bagpara, Baishnabpara.⁷ The island of Ghoramara has been suffering from severe coastal erosion and areal reduction for the last three decades resulting in severe land loss on its north-west coast.⁸ In addition, the southern part of the island started getting affected from 2005 to 2015.⁹

https://doi.org/10.1007/978-3-319-46010-9_11.

³ Ibid.

⁴ Ibid.

⁵ Tuhin Ghosh, Rituparna Hajra, and Anirban Mukhopadhyay, “Island Erosion and Afflicted Population: Crisis and Policies to Handle Climate Change,” in *International Perspectives on Climate Change*, Climate Change Management (Springer, Cham, 2014), 217–25, https://doi.org/10.1007/978-3-319-04489-7_15.

⁶ Ibid.

⁷ Hajra, Ghosh, and Ghosh, “Comparative Assessment of Morphological and Landuse/Landcover Change Pattern of Sagar, Ghoramara, and Mousani Island of Indian Sundarban Delta Through Remote Sensing.”

⁸ Ghosh et al., “Island Erosion and Afflicted Population.”

⁹ Hajra et al., “Comparative Assessment of Morphological and Landuse/Landcover Change Pattern of Sagar, Ghoramara, and Mousani Island of Indian Sundarban Delta Through Remote Sensing.”

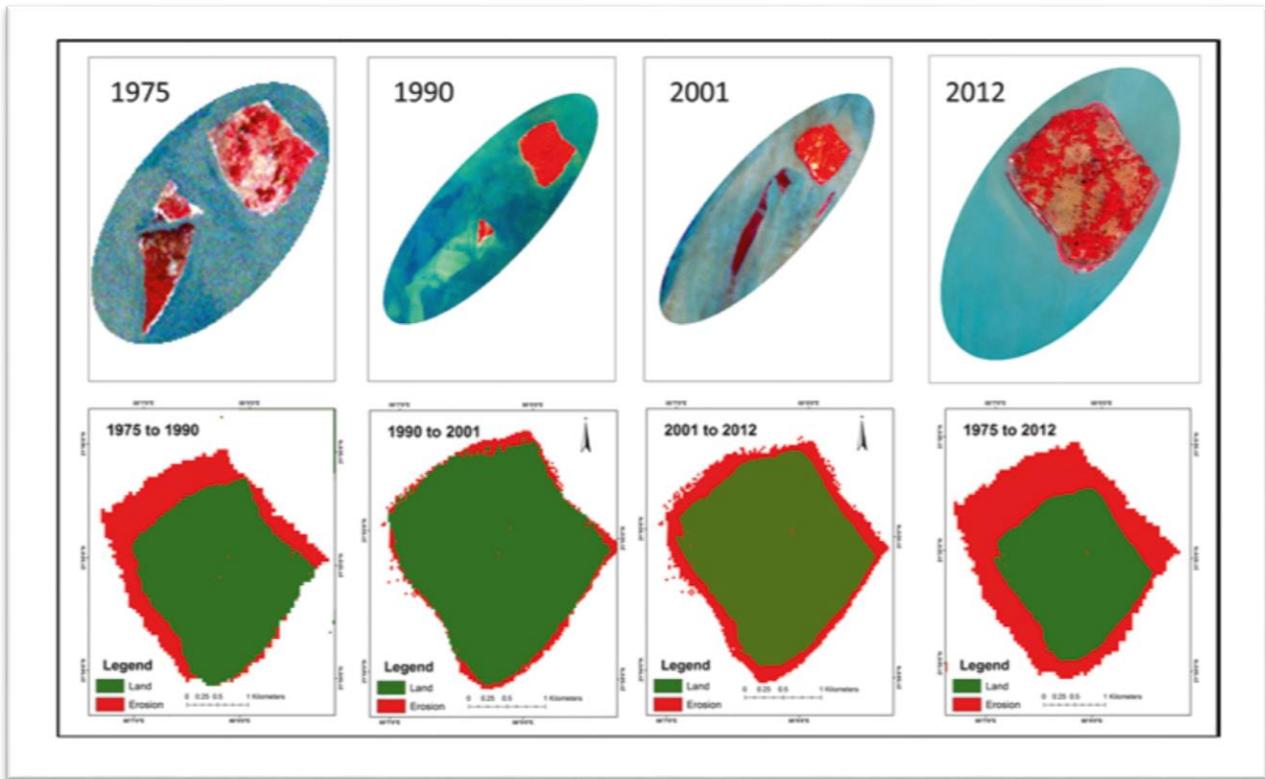


Figure 1: Time series analysis by Ghosh et al. show the extent of erosion in Ghoramara Island during the period of 1975–2012¹⁰

The force of nature in shaping and reshaping the island cannot be negated. However, the narratives on the causation of the embankment failure are built on climate change as the primary causation factor with other reasons like port construction sprinkled sparsely. It is, however, pertinent to ask as to why Ghoramara Island is disproportionately burdened by the rising sea-level and not the other nearby islands like Nayachar or open sea island like Jambudwip. In 2009, an Indian daily *Times of India* interviewed the former Kolkata Port Trust (KoPT) hydraulic engineers who blamed the “lackadaisical attitude of port authorities and lack of proper dredging”¹¹ for the vanishing of islands, more than global warming. The former chief hydraulic engineer of KoPT, Tapobrata Sanyal stated in this newspaper interview,

¹⁰ Ghosh et al., “Island Erosion and Afflicted Population.”

¹¹ Achinyarup Ray, “Vanishing Islands: Blame on KoPT - Times of India,” *The Times of India*, accessed December 6, 2017, <https://timesofindia.indiatimes.com/city/kolkata/Vanishing-islands-Blame-on-KoPT/articleshow/4352474.cms>.

“Several geo-morphological changes and other problems were behind the fragile islands eroding. While I was in KoPT, we had submitted a Rs 360-crore plan to solve the navigability problems and improve the draught in the estuary. It was a seven-point project, which included building a number of underwater guide walls. But only one of the walls could be built before the scheme got shelved for want of funds.”¹²

Focusing on a similar human intervention angle, writing a travelogue for *Roads and Kingdoms*, Journalist Anuradha Sengupta informs that “the problem started in the early 1980s when the Kolkata Port Trust started building several underwater walls to divert the river and widen the Kolkata-bound shipping route. The project was abandoned halfway. These underwater walls have led to higher tides and stronger currents.”¹³ To complicate the presence of already existing stresses on the habited islands in this fragile ecosystem, climate change is increasingly acting as a stress multiplier. Talking about the sea level rise in the Bay of Bengal, Oceanographer Sujata Hazra said, “Until 2000, the sea levels rose about 3mm (0.12 inches) a year, but over the last decade they have been rising about 5mm annually.”¹⁴

The hostility of this terrain to its inhabitants cannot be understated, as the river doesn't distinguish between the animate and inanimate when it is in its full ravaging force. It supports life only to destroy it at its own will. The gradual process of land loss and embankment breaching has severely affected this island community due to its dependence on natural resources for survival. The primary occupation of local population in Ghoramara is rice and betel cultivation, fishing and prawn seed collection. The invading water is forcing people to move further and further to the center of the island where the population density is high. The 2011 census accounts for 5193 people on the island. However, this number keeps fluctuating as invading waters are forcing people to migrate. Migration is the living reality for many in Ghoramara. A story that has gained much

¹² Ibid.

¹³ Sengupta, “The Slipdown.”

¹⁴ Associated Press, “Island Claimed by India and Bangladesh Sinks below Waves,” *The Guardian*, March 24, 2010, <http://www.theguardian.com/world/cif-green/2010/mar/24/india-bangladesh-sea-levels>.

traction in local and global media. It has been asserted that 70,000 people out of 4.1 million living in the Indian part of the Sundarbans would be rendered homeless by 2020.¹⁵ The labels like ‘climate refugees’ and ‘environmental refugees’ are used for migrants from Ghoramara.

This short documentary film has been conceptualized to understand the effects of climate change at the level of society, especially the coastal community, wherein the livelihoods and culture are entangled with the nature around them. The exclusive focus on Ghoramara is due to the extensive coverage it has received in the last couple of years as the Island producing “India’s own climate refugees.”¹⁶ In addition to being a brewing migration crisis, the climate justice angle is still waiting to be addressed to include the narratives of those suffering in the policy circles.

To address these issues, this capstone project attempts to answer the following interrelated questions: a) What is the reason behind extensive soil erosion in Ghoramara Island? b) How is the rapidly subsiding land affecting the livelihoods of this island community? c) Has there been any effect on the culture or any form of cultural practice? d) Is migration seen as an adaptation strategy by the community members? e) Where does India as a country stand on the issue of climate-induced migration?

Inching Closer builds on the narratives of a community which is slowly but gradually making sense of receding shorelines, collapsing land and fading traditions of agriculture and fishing. It weaves a crochet following expert narratives on the reason behind extensive soil erosion in Ghoramara and the experiences of those most affected by the loss of land. This short documentary is built in four sections- The Problem, The Root, The Community and The

¹⁵ Architesh Panda, “Climate Refugees: Implications for India,” *Economic and Political Weekly* 45, no. 20 (May 15, 2010): 76–79.

¹⁶ “Sundarbans: Meet India’s Own Climate Refugees from Ghoramara Islands,” Firstpost, accessed March 31, 2018, <https://www.firstpost.com/india/sundarbans-meet-indias-own-climate-refugees-from-ghoramara-islands-2823328.html>.

Uncertainty.

The documentary starts with a montage and title text to roll into the introductory section. This section brings forward the stories of loss by the Ghoramara community. In a nostalgic tone, the village headman recalls, “The Ghoramara island [is] eroding, ever since I [have] been conscious enough, now I am 44. Since childhood I see this island is breaking... our house was [a] bit towards the north [but now] we [have] shifted a little further up this side.” Another Ghoramara Islander narrates a time of crisis, “... water gushed inside our house, then we had to shift with our babies a little interior [of island] to where we were staying [now]. When water got inside our house we had to spend days under trees with our kids.” Lamenting the loss of land, she continues, “The erosion caused tremendous loss to us. Our land was gone. The reason why we can’t do agriculture anymore. We even have to starve with our kids.” The fear of one’s land being engulfed by the river has been persistent in the minds of this coastal community which is captured through a couple of more SOTs (sound on tape) in this section.

The second section, “The Root,” engages with the reasons behind extensive soil erosion in Ghoramara. The multiple narratives that are put forth in this section by various experts backed my understanding of the issue as one of climate justice. Independent Photojournalist, Tanmoy Bhaduri calls climate change as the real culprit. Explaining the effect of climate change induced sea level rise, Kalyan Rudra explains, “Nobody denies the sea-level rise, this may vary at 2mm/year to someone says it is 10 mm or something like that. Some claims it is even more than that. But one important issue of the Bengal Delta or the Ganga-Brahmaputra delta that this coastal track is subsiding maybe at the equal rate of 2mm/year, so net effect will be 2 mm subsidence and 2 mm rise, so 4mm effective rise of the sea level. So, this is very active.” Environmental activist, Tushar Kanjilal adds that the vulnerability of Ghoramara is far greater as it is in the mouth of Bay of Bengal.

On the other hand, Prof. Tuhin Ghosh has a different story to tell, “the maximum possibility of the impact is coming from the human intervention. From the Kolkata port trust they have designed, with some consultant input, seven guidewalls and out of seven, they have only employed one and that’s why the river hydrodynamic system completely changed and the wave convergence towards the Ghoramara is happening. That’s why Bedford and Lohachara, the other two southern part islands of Ghoramara have submerged, but Ghoramara has reduced a lot in the last 25-30 years, you can see, around 60% reduction of Ghoramara is there.”

The third section of the documentary explores the community in its suffering, and how that has translated into a sense of bonding. The loss of land has severely affected the livelihood of people on the island of Ghoramara. Primary occupation still remains as rice cultivation, however, due to land subsidence the area under cultivation has been drastically reduced. Those who have lost their land, are now working as waged laborers either in beetle leaf gardens or sometimes rebuilding the embankment on a 100 day job scheme by government.

The village headmen puts it succinctly, “In the past the people of Ghoramara was[were] depended [dependent] on agriculture. Farming was the source of their livelihood. By selling the rice they used to run their families. Gradually along with rice they started growing chillies, watermelons and in rivers they use to fish min-bangda [Mackerel]. These were the source of their income, even they used to fish hilsas. Their livelihood depend on these. Later the occupation started to change. Their source of income changed. Now we have less land for agriculture. A lot of land has gone into the river. So presently we are more depended [dependent] on Beetle leaf cultivation.”

Changing livelihoods bring out a tone of nostalgia for many in the village, “There were lentil farming, mustard farming, potato farming that took place too, these days none of them is cultivated.” Even the rickshaw drivers are affected due to breaching of the embankment, “Houses

are getting washed away, village is getting smaller. Initially I used to carry more passengers in my van. I am a van rickshaw driver. I used to carry more passengers, now the village is getting smaller. People do not have to travel greater distance, they simply walk.”

Even the rituals associated with the production are fading away, “when there was sufficient land for rice cultivation, we had many rituals to perform. In twelve months we almost had thirteen festivals associated to such rituals. Nabanna, Payesum [local preparations of Bengali cuisine] were made. After the loss of land, we can’t perform those rituals much. These days the festivities are performed once in a while. Initially we could celebrate two or three times in a month but now it has reduced to only two or three times in a year.”

However, the sense of community and social bonds are stronger. In the times of crisis, the resources such as primary school which acts as a shelter are shared amicably. As Prof Gupinath Bhandari says, in Sundarbans, there is prevalence of group culture. He recalls, “In last year, I have seen there is a festival called Jagannath Rath Yatra [hindu chariot festival] and same day, Eid [muslim festival] was there. I have personally seen that Muslim children wearing new clothes they are pulling the rath [chariot]... They [have] built up their secularism on their own... They act as a single group because day in and day out they have to fight with the nature.” Kanjilal claims that Ghoramara was once a very prosperous place, but now most of the population of the island has become “environmental refugees, some of them have come to the [nearby] Sagar [Island].”

The last section revolves around the looming uncertainties in the life of villagers. People who want to migrate cannot do so due to financial constraints and due to loss of livelihoods some of them even find it difficult to reconstruct the shelter on Ghoramara. Earlier, some of the villagers who lost the land were resettled by the government on the nearby Sagar Island. Based on his research on migration from Ghoramara Island to Sagar, Tuhin Ghosh adds, “[While] dealing with the debate between climate refugees and environmentally displaced people. There is one fact that in

India, there is no such policy to support these kind of people [displaced people]... people migrated to Sagar island from Ghoramara they got some incentives from the local government and panchayat system. That is not sufficient for them but they still got something whenever they came earlier. But, nowadays whenever they are moving out- they are not getting anything because there is no land, there is no possibility to provide any benefits.”

METHODOLOGY

Inching Closer is shot in two locations in India– Ghoramara Island and the city of Kolkata in the state of West Bengal. This is a short documentary project of approximately 10 minutes.

Pre-production

The pre-production phase focused on building the treatment and synopsis for the documentary. Due to the strong human element in the narrative, the significant part of the pre-production phase involved identifying the talking heads/interviewees for the film. This required reading through the news stories, feature articles and research journals covering the small islands of Sundarban Delta Complex. An incredible source of information was available on the geomorphological changes in Ghoramara due to the research by School of Oceanographic Study at Jadavpur University, Kolkata. Having worked as a journalist in India, I contacted my sources in Kolkata to discuss the idea behind the proposal. Due to the remote location of Ghoramara, it was determined that the potential interviewees from the island could be approached only through face-to-face interaction in India. Also, that the residents were supposed to be contacted with the help of *Gram Panchayat Pradhan* (Village Headman).

Meanwhile, the subject-matter experts were approached via email and telephone to explain the research, and its aspects, scope, risks and potential impacts. Calls were made to river systems expert, Kalyan Rudra who is currently working as the Chairman of Pollution Control Board with the state government of West Bengal. Padma Shri awardee, Tushar Kanjilal was contacted for his work on the environmental and livelihood issues in Sundarbans. Also, a coastal zone management expert, Prof. Gopinath Bhandari of Jadavpur University was contacted for his inputs on Ghoramara. Besides, emails were sent to the following potential interviewees:

- Prof. Tuhin Ghosh of the School of Oceanographic Studies at Jadavpur University who has been studying Ghoramara and nearby delta islands for more than two decades. His current project, 'DECCMA' engages with the impacts of climate change, adaptation, and migration in deltas.
- Tanmoy Bhaduri, an independent photojournalist, who has been awarded crisis reporting fellowship by Pulitzer Center for covering underreported issues on human trafficking, women and children's rights, climate change, conflicts and natural disaster . Tanmoy has been covering the lives and livelihood issues in Ghoramara Island as part of his independent photo-series projects.
- Society for Socio Economic and Ecological Development (SEED), an NGO working on the livelihood issues and adaptation strategies in the Sundarbans. An informal briefing happened with Dr. Somenath Bhattacharyya, Executive Director of SEED, on the trip to Kolkata. However, the final interview could not be recorded due to his traveling schedule.
- Sunita Narain, a prominent Indian environmentalist and political expert, was contacted for the perspective on Indian government's policy regarding IDPs and environmental migrants. In an email exchange, she informed about her prior traveling commitments. Therefore, she could not be interviewed for the project.

Production

After the approval from the Institutional Review Board (IRB), I started the process of interviewing and shooting the footage for the documentary in India. The filming process began in the last week of December 2017 and continued till the mid-January 2018. A translator was hired

from the city of Kolkata for verbatim translations of the interviews as the Islanders speak Bengali, which is one of the 22 recognized languages in India. The translator, Sayak Manna, accompanied me to Ghoramara. Travelling to Ghoramara was no easy business. After making a two hour ride by road from Kolkata city to Kakdwip, one walks to Lot No. 8 jetty (ferry port) and takes a 45 minute boat ride to Ghoramara. Upon reaching Ghoramara, the village headman was briefed about the project, its minimal risk approach and one-time participation by the community. Subsequently, village headman was interviewed and later, seven community members who consented were recorded on camera. All the subject matter experts such as Kalyan Rudra, Tushar Kalanji, Prof. Tuhin Ghosh, Prof. Gupinath Bhandari, Tanmoy Bhaduri were interviewed in Kolkata.

For the documentary, following visuals were shots – embankment failure, ferry approaching and leaving the island of Ghoramara, people onboard the ferry, paddy fields, betel vine cultivation area, damaged and abandoned houses and boats, women making fishing nets, generic shots of people on the street. A couple of still pictures were also taken to add to the narrative. The documentary film was shot using the following equipment:

- Fuji XT2 camera (with 4K video capture ability)
- Lenses used-
 - Fujifilm XF 16-55mm f/2.8 R LM WR
 - Fujifilm XF 18-55mm f/3.5-4.6 R LM OIS
 - Fujifilm XF 35mm f/2 R WR lens
 - Fujifilm XF 56mm f/1.2 R lens
- RØDE VideoMic Pro- on-camera shotgun microphone
- Lavalier microphone
- Tripod

Post-production

This short documentary combines the filmed footage of Ghoramara Island, audio-video interviews, graphic text and royalty free background score. The film follows the documentary style of narration: Hook → Conflict → Narrative. For simplicity of narration, the documentary is divided into the following sequences- The Problem, The Root, The Community, The Uncertainty.

Editing took place over a period of a few weeks, as the narrative was built around the themes in the interviews and overlaying the matching footage/b-roll on the interviews. Standalone visual montages were used to emphasize the major themes in the narrative. After several edit passes, color correction was added. Following software(s) and hardware has been used for the editing purpose:

- Adobe Premiere Pro CC (2018 version)
- Adobe Media Encoder CC (2018 version)
- MacBook Pro hardware

Viewing of the Documentary Film

An HD video file has been made available to the library via CUNY Academic Works.

However, the documentary film is also available to view online at: <https://vimeo.com/264093874>.

Viewing it on Vimeo requires a password, which is: MALScapstone.

RELATIONSHIP TO TRACK AND PREVIOUS COURSE OF STUDY

I chose the Sustainability Science and Education for the core of my studies at CUNY for the MALS program. My rationale for submitting a documentary film for the Capstone Project was to put into practice the theories and concepts that I picked up in my core and elective courses. Also, this project is a bridge between my recent learnings in sustainability and my background in journalism. Having written reading responses, class assignments, and final papers, I wanted to submit a project that will take me a step closer to my career choice, i.e., to create socially-relevant media.

Climate change has this nagging quality of rattling the cage. From the time of publication of Rachel Carson's "Silent Spring" to the 2017 season of hurricanes, climate change has refused to be boxed as an ecology-based hard science issue. My core course, Sustainability and Human Ecodynamics, helped me think of climate change also as a climate justice issue, wherein, certain communities are affected more than others. As climate change magnifies and exacerbates existing problems, issues, tensions and challenges in a community especially of those at the very margins of the society. The course helped me engage with questions like how people understand and experience climate change, how the communities affected by climate change respond and adapt to it and how problematic the concept of sustainability becomes if it gets divorced from the cultural aspects of society.

In this capstone project, I have attempted to delve in similar questions to understand the effects of climate change at the level of community. Conceptually, to explain the effects of extensive erosion on Ghoramara Island, the project is using Beck's risk society thesis¹⁷ to understand how the unequal distribution of risks affects the social and cultural dimensions of the

¹⁷ Ulrich Beck, *Risk Society: Towards a New Modernity* (SAGE, 1992).

lives and livelihoods. Beck's risk society thesis provides a "conceptual starting point"¹⁸ for understanding climate change risks and politics. According to Beck, climate change causes lie deep within modernity, risks are distributed unequally, assigning responsibility is difficult and identification/measurement of risks is dependent on scientific knowledge.¹⁹ What Beck describes as unequal distribution of risks, is now becoming the lived reality for many on Ghoramara Island. In the case of Ghoramara, too, the community bearing the brunt of climate change has done nothing to cause it. With negligible carbon footprint, such communities are at the forefront of climate change. Adding to the injury, is the angle of environmental injustice, wherein, Prof. Tuhin Ghosh explains how an unfinished guide wall project by the Kolkata Port Trust is leading to wave convergence towards Ghoramara.

The perception of risk from the impacts of climate change, as Hermann puts it, finds voice in the emotional discourses (especially worry) about the land and its people.²⁰ The risk is not just a physical threat, it is also bound up in people's understanding of themselves and their lifeworlds.²¹ Here I have used my learnings from an environmental anthropology course— *Anthropological Approaches to Nature and the Environment*. Adger et al. notes how society's response to every dimension of global climate change is mediated by culture.²² Borrowing from Swidler and Hays, culture is defined here as "the symbols that express meaning, including beliefs, rituals, art and stories that create collective outlooks and behaviors, and from which strategies to respond to

¹⁸ Harriet Bulkeley, "Governing Climate Change: The Politics of Risk Society?," *Transactions of the Institute of British Geographers* 26, no. 4 (December 1, 2001): 430–47, <https://doi.org/10.1111/1475-5661.00033>.

¹⁹ Bulkeley.

²⁰ Elfriede Hermann, "Climate Change and Worries over Land: Articulations in the Atoll State of Kiribati," in *Environmental Transformations and Cultural Responses: Ontologies, Discourses, and Practices in Oceania* (Springer, 2017), 50–74.

²¹ Ainka A. Granderson, "Making Sense of Climate Change Risks and Responses at the Community Level: A Cultural-Political Lens," *Climate Risk Management* 3 (2014): 55–64, <https://doi.org/10.1016/j.crm.2014.05.003>.

²² W. Neil Adger et al., "Cultural Dimensions of Climate Change Impacts and Adaptation," *Nature Climate Change* 3, no. 2 (February 2013): 112–17, <https://doi.org/10.1038/nclimate1666>.

problems are devised and implemented.”²³ Locals express frustration and a sense of loss due to changing occupations, less area to cultivate and even lesser products to grow. The rituals surrounding the rice cultivation have also been reduced. In spite of this looming sense of loss, the stories of social cohesion are many. It is important here to recall the interesting story on social bonds in Sundarbans, narrated by Prof Gupinath Bhandari.

The concept of migration or forced migration, also, reads closely into the risk society thesis, wherein “the extent and the symptoms of people’s endangerment are fundamentally dependent on external knowledge” and “the affected parties are becoming incompetent in matters of their own affliction.”²⁴ Such top-down adaptation strategies are usually met with resistance as they fail to accurately represent the perceptions of people affected and the range of adaptation options afforded to them.²⁵ To delve into the discourse around climate refugees, the concepts from the International Studies Course- Migration and Human Rights, have been used to make sense of migration from Ghoramara. The migration story has been widely covered in the media and the academic circles, albeit with problematic narrative. The labels like ‘climate refugees’ and ‘environmental refugees’ are used for the people who are migrating from Ghoramara to nearby islands or other urban centers. It is important to note that India has neither signed the 1951 United Nations Refugee Convention nor its 1967 Protocol.²⁶ Also, India does not “permit the UN high commissioner for refugees- which works with Internally Displaced Persons (IDPs) – access to camps.”²⁷ As such, there is no

²³ Ibid.

²⁴ Beck, *Risk Society*, 53.

²⁵ Heather Lazrus, “The Concepts of Adaptation, Vulnerability, and Resilience in the Anthropology of Climate Change: Considering the Case of Displacement and Migration,” in *Anthropology and Climate Change: From Encounters to Actions* (Routledge, 2016).

²⁶ United Nations High Commissioner for Refugees, “UNHCR Global Appeal 2011 (Update) - India,” UNHCR, accessed April 3, 2018, <http://www.unhcr.org/publications/fundraising/4cd96e919/unhcr-global-appeal-2011-update-india.html>.

²⁷ KumKum Dasgupta, “No Legal Status: How India Is Ignoring Its Thousands of Displaced Citizens,” *The Guardian*, August 11, 2016, sec. Global development, <http://www.theguardian.com/global-development/2016/aug/11/no-legal-status-how-india-is-ignoring-its-thousands-of-displaced-citizens-maoist-insurgency>.

legal framework or policy that deals with Internally Displaced People in India.²⁸

As per the current trend, climate change is regarded as a “threat multiplier”²⁹ in the security circles and not as a causation factor. A 2008 background paper by Brookings Institute says, “Climate change is usually referred to as “global warming” and as such does not displace people. Rather climate change produces environmental effects which may make it difficult or even impossible for people to survive where they are.”³⁰

The term ‘climate refugee’ or ‘environmental refugees’ does not exist legally, despite the term being in frequent use, such category falls outside the definition of 1951 Refugee Convention. The 1951 Refugee Convention defines a refugee “as a person who is outside his or her country of nationality or habitual residence; has a well-founded fear of being persecuted because of his or her race, religion, nationality, membership of a particular social group or political opinion; and is unable or unwilling to avail him— or herself of the protection of that country, or to return there, for fear of persecution.”³¹ Environmental conditions do not constitute a basis for international protection; they are descriptive terms, not a status that confers obligations on States.³² Jane McAdam writes, “Even as a merely descriptive term, the ‘climate change refugee’ label is at best pre-emptive, and at worst offensive to those to whom it is ascribed.”³³ As these labels, she

²⁸ Ibid.

²⁹ Robert A. McLeman, *Climate and Human Migration: Past Experiences, Future Challenges* (New York, NY: Cambridge University Press, 2014).

³⁰ Walter Kälin, “Displacement Caused by the Effects of Climate Change: Who Will Be Affected and What Are the Gaps in the Normative Framework for Their Protection?,” *Brookings* (blog), October 10, 2008, <https://www.brookings.edu/research/displacement-caused-by-the-effects-of-climate-change-who-will-be-affected-and-what-are-the-gaps-in-the-normative-framework-for-their-protection/>.

³¹ United Nations High Commissioner for Refugees, “The 1951 Convention Relating to the Status of Refugees and Its 1967 Protocol,” UNHCR, accessed April 3, 2018, <http://www.unhcr.org/about-us/background/4ec262df9/1951-convention-relating-status-refugees-its-1967-protocol.html>.

³² Roger Zetter, Camillo Boano, and Tim Morris, “Environmentally Displaced People: Understanding the Linkages between Environmental Change, Livelihoods and Forced Migration,” *RSC Policy Briefing Series 1* (2008), <https://www.rsc.ox.ac.uk/publications/environmentally-displaced-people-understanding-the-linkages-between-environmental-change-livelihoods-and-forced-migration>.

³³ Jane McAdam, “The Normative Framework of Climate Change-Related Displacement,” *Brookings* (blog), April 3, 2012, <https://www.brookings.edu/research/the-normative-framework-of-climate-change-related-displacement/>.

continues, invoke a sense of helplessness and lack of dignity instead of shaming the perpetrators.³⁴ Due to criticisms against the use of the word refugee, alternative concepts such as environmentally-induced migrants and forced environmental migrants have been put forward to describe the people migrating due to environmental factors and climate change.³⁵ In spite of growing awareness, the ‘human cost of climate change’ is still seen as a moral obligation, not policy preference. The issue of migration and climate change gets embroiled in correlation vs. causation debate. The lack of conceptual clarity regarding a proper definition and shared understanding of the climate-induced migration make states oblivious to their obligations.

The learnings from the sustainability track and the related elective courses have gone into developing the research questions and synopsis for the documentary film. These courses gave me tools to think about a complex issue like sinking of an island, reasons behind it and the affect it has on the community. My previous skills of working in the newsroom in India, have given me insight into the working of the Indian society. It has also helped me build network with journalists, academics and civil society actors which was helpful in researching for this capstone project.

³⁴ Ibid.

³⁵ Panda, “Climate Refugees.” 78.

PROJECT EVALUATION

In an endeavor to complete an audio-visual production, I came across numerous challenges. As the documentary was planned in India, searching/coordinating with the potential participants from New York City proved to be difficult. Primarily, when I was informed that there is no way to contact the Ghoramara residents except for a face-to-face interaction on the island, I was concerned about the project. Operating as a one-woman crew on a self-financed documentary film has its own challenges. Due to the remote location of the island, I had to carry my own gear, set-up the camera and audio equipment. As Ghoramara is untouched by development, it had no guest houses, hotels, public restrooms or markets. It was not possible to stay there at night. I had to travel back and forth from the main city of Kolkata. Resultantly, I was unable to capture early morning shots and fishermen heading out to the river at dawn. Besides, I was advised against communicating directly with the fishermen community due to their distinct lifestyle and patriarchal mindset. In order to compensate for the missing footage for fishing community, I recorded the women weaving fishing nets, and also shots of any stationary/abandoned boats were taken.

Due to pending elections for the West Bengal panchayats (village councils) in May 2018, the responses from the village headman in Ghoramara had a political tone. *Gram Panchayat Pradhan* Sanjib Sagar is from the ruling Trinamool Congress (TMC) Party and was biased towards the current administration in his interview. However, he did detail out the current issues faced by the people on the island; his answer to the resettlement of those affected came out as a political response.

Post-production of the film, especially editing the 4K footage in Adobe Premiere Pro CC software on a 13” MacBook Pro was particularly ambitious. Due to the heavy file size, there was difficulty in playing back the videos in the editing software on MacBook. Consequently, I transcoded the 4K

clips into low-resolution videos (1280x720 Apple ProRes 422) that were easy to process and playback on the MacBook. These lower resolution clips are known as proxies. Once I finished editing on low resolution, I replaced everything back with the original 4K clips. The transcoding was one of the most time-consuming part of the post-production process.

This capstone project has given me an excellent opportunity to apply my classroom learnings in the field. Ghoramara Island was an ideal case study as climate change is not something out there in the distant future for them. It is their lived reality. It has helped me better understand the ground reality of the communities affected by climate change. Interviewing the academicians, journalist and government officials has given me an opportunity to bring out range of opinions on the reason behind extensive soil erosion. This capstone project also helped me to reconnect with my previous coursework and experience in Journalism. Although, I was always part of the day-to-day editorial programming in the news channels; I had rarely stepped out of the newsroom in my last job. Due to lack of camera work experience, I also had to learn a lot on the go. I can, hereby, say it has been a well-rounded experience for me.

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